

fingerprints or other defects exist on the optical disk before recording the signal, reliable recording will be hard to achieve at the affected locations of the disk. Accordingly, after recording a signal onto the optical disk, it is possible to remove the optical disk from a cartridge and load it to a 5 regenerating apparatus to regenerate the signal. The optical can, however, be removed from the cartridge 1 of the present invention, and can be reloaded for recording on the recording apparatus of the present invention. In this case, as explained above, the apparatus searches the recordable 10 medium for defects, and then skips any defective locations while recording the desired signal.

As described above, the present invention provides advantages over the prior art. The present invention provides a disk cartridge that houses a recordable medium, and 15 provides an indication as to whether that recordable medium has possibly ever been removed from the cartridge. The user may thereby determine that the recordable medium might be contaminated with fingerprints, dust or other defects prior to attempting to record a signal onto the recording medium. 20

The present invention also provides a signal recording apparatus that can detect whether a signal recording medium has possibly ever been removed from the cartridge. The signal recording apparatus, when it determines that a record- 25 ing medium has possibly been removed from the cartridge, searches for defective locations on the recording medium, and skips any such places during signal recording. The signal recording apparatus thus increases reliability and speed of the recording process.

The present invention further provides an electronic appa- 30 ratus that informs the user of the recordable capacity of a recording medium that has possibly been removed from the cartridge.

Of course, it should be understood that a wide range of 35 modifications can be made to the exemplary embodiments described above. It is therefore intended that the foregoing detailed description be regarded as illustrative rather than limiting and that it be understood that it is the following claims, including all equivalents, which are intended to 40 define the scope of this invention.

CM ✓ What is claimed is:

✓ 1. A cartridge for housing a recording medium therein, comprising:

a cartridge body configured such that a signal recording 45 apparatus can record a signal onto a removable recording medium housed within said cartridge body when said cartridge body is loaded in said signal recording apparatus;

an opening in said cartridge body for removing said 50 recording medium from said cartridge body; and

an indicator for indicating whether a cover over said opening has ever been opened or removed from said cartridge body and for providing such an indication to 55 an electrical detecting device,

wherein said indicator comprises a detachable claw mounted to said cartridge body such that detaching said claw from said cartridge body enables a user to unlatch a latch of said cover and thereby open or remove said 60 cover from said cartridge body.

✓ 2. A cartridge for housing a recording medium therein, comprising:

a cartridge body configured such that a signal recording 65 apparatus can record a signal onto a removable recording medium when said cartridge is loaded in said signal recording apparatus;

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a cover covering said opening; and

10 wherein said indicator comprises a detachable claw mounted to said cartridge body such that detaching said claw from said cartridge body enables a user to unlatch a latch of said and thereby open or remove said cover from said cartridge body.

a cartridge body having at least one window for permitting recording of a signal onto a removable recording medium when said cartridge is loaded in a signal recording apparatus;

a cover covering said opening; and

wherein said indicator comprises a detachable claw mounted to said cartridge body such that detaching said claw from said cartridge body enables a user to unlatch a latch of said cover and thereby open or remove said cover from said cartridge body.

a cartridge body comprising;
first, second and third surfaces, with said first and second
surfaces being on opposite sides of said cartridge body.

45 a second window in said second surface for permitting recording of a signal onto said recording medium when said recording medium is loaded in said signal recording apparatus, said second window being of an approximately identical shape as that of said first window;

a cover covering said opening; and

wherein said indicator comprises a detachable claw mounted to said cartridge body, such that detaching said claw from said cartridge body enables a user to unlatch a latch of said cover and thereby open or remove said cover from said cartridge body.

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✓ 6. A cartridge for housing a recording medium therein, comprising:
a cartridge body configured such that a signal recording apparatus can record a
signal onto a removable recording medium housed within said cartridge body when said
cartridge body is loaded in said signal recording apparatus;

an opening in said cartridge body for removing said recording medium from said
cartridge body; and

an indicator for indicating whether a cover over said opening has ever been
opened or removed from said cartridge body and for providing such an indication to an electrical
detecting device,

wherein said indicator comprises a detachable claw mounted to said cartridge
such that detaching said claw from said cartridge enables a user to unlatch a latch of said cover
and thereby open or remove said cover from said cartridge body.

✓ 7. A cartridge for housing a recording medium therein, comprising:
a cartridge body configured such that a signal recording apparatus can record a
signal onto a removable recording medium when said cartridge is loaded in said signal recording
apparatus;

an opening in said cartridge body for removing said recording medium from said
cartridge body;

a cover covering said opening; and

an indicator for indicating whether said cover has ever been opened or removed
from said cartridge body and for providing such an indication to an electrical detecting device,

wherein said indicator comprises a detachable claw mounted to said cartridge
such that detaching said claw from said cartridge enables a user to unlatch a latch of said cover
and thereby open or remove said cover from said cartridge body.

✓ 8. A cartridge for housing a recording medium therein, comprising:

a cartridge body having at least one window for permitting recording of a signal onto a removable recording medium when said cartridge is loaded in a signal recording apparatus;

an opening in said cartridge body for removing said recording medium from said cartridge body;

a cover covering said opening; and

an indicator for indicating whether said cover has ever been opened or removed from said cartridge body and for providing such an indication to an electrical detecting device,

wherein said indicator comprises a detachable claw mounted to said cartridge such that detaching said claw from said cartridge enables a user to unlatch a latch of said cover and thereby open or remove said cover from said cartridge body.

✓ 9. A cartridge for housing a recording medium therein, comprising:

a cartridge body comprising:

first, second and third surfaces, with said first and second surfaces being on opposite sides of said cartridge body,

a first window in said first surface for permitting recording of a signal onto a removable recording medium when said recording medium is loaded in a signal recording apparatus, and

a second window in said second surface for permitting recording of a signal onto said recording medium when said recording medium is loaded in said signal recording apparatus, said second window being of an approximately identical shape as that of said first window;

an opening provided in said third surface for removing said recording medium from said cartridge;

a cover covering said opening; and

an indicator for indicating whether said cover has ever been opened or removed from said cartridge body and for providing such an indication to an electrical detecting device,

wherein said indicator comprises a detachable claw mounted to said cartridge
such that detaching said claw from said cartridge enables a user to unlatch a latch of said cover
and thereby open or remove said cover from said cartridge body.

10. The cartridge of either claims 7, 8 or 9, wherein said claw and said cartridge
body comprise a single molded article.

11. ~~The cartridge of either claims 7, 8 or 9, wherein said claw and said cover~~
~~comprise a single molded article.~~

12. A cartridge for housing a recording medium therein, comprising:
a cartridge body configured such that a signal recording apparatus can record a
signal onto a removable recording medium housed within said cartridge body when said
cartridge body is loaded in said signal recording apparatus;

an opening in said cartridge body for removing said recording medium from said
cartridge body; and

an indicator for indicating whether a cover over said opening has ever been
opened or removed from said cartridge body and for providing such an indication to an electrical
detecting device.

wherein said indicator comprises a detachable claw engaging said cartridge such
that detaching said claw from said cartridge enables a user to unlatch a latch of said cartridge and
thereby open or remove said cover from said cartridge body.

13. A cartridge for housing a recording medium therein, comprising:
a cartridge body configured such that a signal recording apparatus can record a
signal onto a removable recording medium when said cartridge is loaded in said signal recording
apparatus;

an opening in said cartridge body for removing said recording medium from said cartridge body;

a cover covering said opening; and

an indicator for indicating whether said cover has ever been opened or removed from said cartridge body and for providing such an indication to an electrical detecting device,

wherein said indicator comprises a detachable claw engaging said cartridge such that detaching said claw from said cartridge enables a user to unlatch a latch of said cartridge and thereby open or remove said cover from said cartridge body.

✓¹³ 14. A cartridge for housing a recording medium therein, comprising:

a cartridge body having at least one window for permitting recording of a signal onto a removable recording medium when said cartridge is loaded in a signal recording apparatus;

an opening in said cartridge body for removing said recording medium from said cartridge body;

a cover covering said opening; and

an indicator for indicating whether said cover has ever been opened or removed from said cartridge body and for providing such an indication to an electrical detecting device,

wherein said indicator comprises a detachable claw engaging said cartridge such that detaching said claw from said cartridge enables a user to unlatch a latch of said cartridge and thereby open or remove said cover from said cartridge body.

✓¹⁴ 15. A cartridge for housing a recording medium therein, comprising:

a cartridge body comprising:

first, second and third surfaces, with said first and second surfaces being on opposite sides of said cartridge body,

a first window in said first surface for permitting recording of a signal onto a removable recording medium when said recording medium is loaded in a signal recording apparatus, and

a second window in said second surface for permitting recording of a signal onto said recording medium when said recording medium is loaded in said signal recording apparatus, said second window being of an approximately identical shape as that of said first window;

an opening provided in said third surface for removing said recording medium from said cartridge;

a cover covering said opening; and

an indicator for indicating whether said cover has ever been opened or removed from said cartridge body and for providing such an indication to an electrical detecting device,

wherein said indicator comprises a detachable claw engaging said cartridge such that detaching said claw from said cartridge enables a user to unlatch a latch of said cartridge and thereby open or remove said cover from said cartridge body.

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16. The cartridge of either claims 13, 14 or 15, wherein said claw and said cartridge body comprise a single molded article.

17. The cartridge of either claims 13, 14 or 15, wherein said claw and said cover comprise a single molded article.

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